Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	2	levopimaradiene	US-PGPUB; USPAT	ADJ	OFF	2004/08/30 09:00
L2	152	ginkgolide$1	US-PGPUB; USPAT	ADJ	OFF	2004/08/30 09:01
L3	12	2 same enzym$	US-PGPUB; USPAT	ADJ	OFF	2004/08/30 09:02

priority to 1/5/01

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	2	levopimaradiene	US-PGPUB; USPAT	ADJ	OFF	2004/08/30 08:35

PGPUB-DOCUMENT-NUMBER: 20040072323

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040072323 A1

TITLE: Diterpene-producing unicellular organism

PUBLICATION-DATE: April 15, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Matsuda, Seiichi P.T.	Houston	TX	US	
Hart, Elizabeth A.	Houston	TX	US	

APPL-NO: 10/ 041018

DATE FILED: January 7, 2002

RELATED-US-APPL-DATA:

non-provisional-of-provisional 60259880 20010105 US

US-CL-CURRENT: 435/252.3, 435/155 , 435/166

ABSTRACT:

The present invention is directed to a unicellular organism system, such as a yeast, for producing geranylgeranyl pyrophosphate and a diterpene in vivo. The yeast cell preferably comprises an inducible nucleic acid sequence encoding geranylgeranyl pyrophosphate synthase, an inducible nucleic acid sequence encoding a soluble form of HMG-CoA reductase, a nucleic acid sequence of an allele that confers an increase in sterol metabolic flux and, in the diterpene-producing cell, a diterpene synthase.

---------- KWIC ---------

Detail Description Paragraph - DETX (4):
[0047] The technology of the present invention is related to the invention described in the U.S. patent application entitled, "Ginkgo biloba Levopimaradiene Synthase" filed on the same day and incorporated by reference herein.

Detail Description Paragraph - DETX (46):
[0089] In a specific embodiment, a Ginkgo biloba levopimaradiene synthase nucleic acid sequence (SEQ ID NO:397), which encodes the amino acid sequence of SEQ ID NO:398, is utilized for a diterpene synthase in the present invention, wherein the sequences are the subject of a U.S. patent application filed on the same day as this present application and is entitled, "Ginkgo biloba Levopimaradiene Synthase," incorporated by reference herein.

Detail Description Paragraph - DETX (153):
[0175] A 1-L induced culture of EHY18[pEH9.0] was grown under conditions wherein diterpene and diterpene precursors were produced. The resin eluent was purified for the major product (5 mg, 85% pure) and confirmed by .sup.1H-NMR to be biosynthetic 7,13-abietadiene (FIG. 9). The abietadiene fraction contained at least three biosynthetic products possessing m/z=272 by GC/MS analysis. The

major compound (97% relative ratio) was confirmed to be 7,13-abietadiene. An isomer (3% relative ratio) of biosynthetic origin produced a fragmentation pattern that corresponded to neoabietadiene. In addition, NMR data demonstrated an upfield methyl singlet (.delta.0.629 ppm) indicated the presence of another isomer possessing, most likely, a double bond at the C-7 position. No evidence of levopimaradiene was found despite significant production of this isomer detected upon expression of a truncated abietadiene synthase and in vitro incubation with substrate (Ravn et al., 1998).

PGPUB-DOCUMENT-NUMBER: 20020164736

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020164736 A1

TITLE: Ginkgo biloba levopimaradiene synthase

PUBLICATION-DATE: November 7, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Matsuda, Seiichi P.T.	Houston	TX	US	
Schepmann, Hala G.	Talent	OR	US	

US-CL-CURRENT: 435/183, 435/252.33 , 435/254.2 , 435/320.1 , 536/23.2

ABSTRACT:

The present invention is directed to nucleic acid sequences of Ginkgo biloba diterpene synthases, particularly of a levopimaradiene synthase. More specifically, the invention is directed to a cell of a unicellular organism, such as Saccharomyces cerevisiae or Escherichia coli, comprising levopimaradiene synthase for the metabolically engineered in vivo biosynthesis of a diterpene and a ginkgolide.

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	2	levopimaradiene	US-PGPUB; USPAT	ADJ	OFF	2004/08/30 09:00
L2	152	ginkgolide$1	US-PGPUB; USPAT	ADJ	OFF	2004/08/30 09:01
L3	12	2 same enzym$	US-PGPUB; USPAT	ADJ	OFF	2004/08/30 09:02

PGPUB-DOCUMENT-NUMBER: 20040091477

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040091477 A1

TITLE: Immunosuppresive compositions

PUBLICATION-DATE: May 13, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Haines, David	McLeans	VA	US	
Tosaki, Arpad	Debrecen		HU	
Mahmound, Fadia F.	Salawa Kuwait		KW	

APPL-NO: 10/ 275996

DATE FILED: June 5, 2003

PCT-DATA:
APPL-NO: PCT/US01/14718
DATE-FILED: May 8, 2001
PUB-NO:
PUB-DATE:
371-DATE:
102(E)-DATE:

US-CL-CURRENT: 424/144.1, 424/752 , 514/11 , 514/291

ABSTRACT:

The invention features a composition containing an immunophilin-binding compound and a ginkgolide compound, methods of inducing immunosuppression, and methods of screening for immunosuppressive ginkgolide compounds. The ginkgolide compound is selected from the group consisting of a phosphodiesterase inhibitor, a platelet activating factor (PAFR) antagonist, and a free radical scavenger.

---------- KWIC ---------

Detail Description Paragraph - DETX (31):
[0039] Ginkgolide biflavonoids have been shown to have a cardioprotective effect. The influence of the main flavonoids from Crataegus species (hawthorn, Rosaceae) on coronary flow, heart rate and left ventricular pressure was investigated. Cardioprotective effects were observed with treatment of O-glycosides luteolin-7-glucoside (186%), hyperoside (66%) and rutin (66%). The data showed an inhibition of the 3',5'-cyclic adenosine monophosphate phosphodiesterase and suggest an inhibition of this enzyme is a mechanism of cardioprotection of flavonoids (Schussler et al. 1995, Arzneimittel-Forschung 45:842-5).

Detail Description Paragraph - DETX (49):
[0051] The data described herein demonstrates that cardiac reperfusion-induced arrhythmias are dependent on presence of free radicals. Arrhythmias were reduced by administration of either antioxidant enzymes or

ginkgolide (e.g., EGb761). Normal cardiac function is dependent on the ability of cell membranes to maintain discrete differentials of ionic species. Free radicals produced in reperfusion injury react with membrane components, leading to loss of ion separation integrity, leading to arrhythmias and other pathological effects. Antioxidants stabilize cardiac membranes with respect to their ability to maintain compartmentalization of critical ionic species. The antioxidant properties of Ginkgo biloba (e.g., the terpene component of EGb761) has cardioprotective effects. Antioxidants in EGb761 are also immunosuppressive by acting as scavengers of free radicals, thereby decreasing the degree of allograft-associated inflammatory damage.

Detail Description Paragraph - DETX (120):

[0096] Combining FK506 with other treatments which lower its dosage requirement without diminishing its cardioprotective properties allows clinical use of FK506 in prevention and therapy of cardiac disorders. The highest dosage of the ginkgolide was 25 mg/kg, which did not result in significant decreases in either VF or VT. Likewise, FK506 dosages between 1-5 mg/kg failed to affect these parameters. Combined treatment with both drugs synergistically and dose-responsively reduced the incidence of postischemic arrhythmias and additionally resulted in significant improvements in cardiac function. The molecular mechanisms contributing to these effects include diminished levels of oxygen radical-induced damage to cardiomyocyte membranes, resulting from the demonstrated antioxidant properties of EGb 761, contributing to restoration of stable compartmentalization and transmembrane flow of Na.sup.+, K.sup.+, Ca.sup.2+ and Mg.sup.2+. Coadministration to rats of EGb 761 plus antioxidant enzymes (SOD or catalase), also produced a dose-dependent reduction in reperfusion-induced arrhythmias (albeit not as dramatic as the ginkgolide-FK506 combination), paralleled by decreases in free radical concentrations as measured by DMPO adduct formation in heart perfusate buffer. The data indicate that development of cardiac hypertrophy is prevented by administration of an immunophilin-binding immunosuppressive agent and a gingkolide. The combination allows subtoxic dosage of an immunophilin-binding composition, e.g., FK506, by coadministration of a ginkgolide.

PGPUB-DOCUMENT-NUMBER: 20040076691

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040076691 A1

TITLE: Anti-inflammatory formulations

PUBLICATION-DATE: April 22, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Haines, David	McClean	VA	US	
Mahmoud, Fadia F.	Salawa	CA	KW	
Pratt, Steven G.	Del Mar	CA	US	
Wise, John	Encinitas		US	

APPL-NO: 10/ 621802

DATE FILED: July 16, 2003

RELATED-US-APPL-DATA:

child 10621802 A1 20030716

parent continuation-in-part-of 10345856 20030116 US PENDING

non-provisional-of-provisional 60350298 20020116 US

US-CL-CURRENT: 424/729, 424/732 , 424/736 , 424/756 , 424/765 , 424/766 , 514/18 , 514/27 , 514/456 , 514/560 , 514/763

ABSTRACT:

The invention features compositions containing an antioxidant and/or a gingkolide compound to reduce inflammation. Combination drug therapy using antioxidant and/or a gingkolide compound with an anti-inflammatory agent reduces adverse side effects associated with many known anti-inflammatory agents.

[0001] This application is a continuation in part of U.S. Ser. No. 10/345,856, filed on Jan. 16, 2003 which claims the benefit of provisional application U.S. S. No. 60/350,298, filed on Jan. 16, 2002, the entire contents of which is hereby incorporated by reference in their entireties.

---------- KWIC ---------

Detail Description Paragraph - DETX (69):

[0089] Eosinophils are a major component of the inflammatory infiltrate characteristic of dry eye and a major contributor to inflammatory damage in the disorder (Lobefalo L. 1999). It has been shown in a histamine-induced guinea pig eye model of tissue eosinophilia, oral treatment of the animals with rolipram, an isozyme IV-selective inhibitor of cAMP-specific phosphodiesterase significantly suppressed infiltrate of these cells (Newsholme S J, 1993). The biflavone ginkgolides also exhibit varying capacity to inhibit

cAMP-phosphodiesterase, with the degree of enzyme inhibition following the order: amentoflavone>bilobetin>sequoiaflavone>ginkgetin=isoginkgetin; but almost no capacity for inhibition of this enzyme by sciadopitysin (Saponara R., et al, 1998).

PGPUB-DOCUMENT-NUMBER: 20030225052

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030225052 A1

TITLE: Analogs of terpene trilactones from Ginkgo biloba and related compounds and uses thereof

PUBLICATION-DATE: December 4, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Stromgaard, Kristian	New York	NY	US	
Suehiro, Makiko	White Plains	NY	US	
Nakanishi, Koji	New York	NY	US	
Vogensen, Stine B.	Copenhagen N		DK	

APPL-NO: 10/ 401931

DATE FILED: March 28, 2003

RELATED-US-APPL-DATA:

child 10401931 A1 20030328

parent continuation-in-part-of 10109965 20020329 US PENDING

non-provisional-of-provisional 60436916 20021227 US

US-CL-CURRENT: 514/183, 424/1.11 , 514/249 , 514/468 , 544/353 , 548/960 , 549/297

ABSTRACT:

The subject invention provides compounds having the structure: 1 wherein R.sub.1 is H, OH, a photoactivatable moiety, a fluorescent moiety, or a radioactive moiety; R.sub.2 is H, OH, a photoactivatable moiety, a fluorescent-moiety, or a radioactive moiety; R.sub.3 is H or OH; R.sub.4 is H, OH, a photoactivatable moiety, a fluorescent moiety, or a radioactive moiety; and wherein at least one of R.sub.1, R.sub.2, R.sub.3, or R.sub.4 is a photoactivatable moiety, a fluorescent moiety, or a radioactive moiety, or an optically pure enantiomer of the compound or wherein R1 is H or OH; R2 is H, OH, halogen, unsubstituted or substituted, straight or branched (C.sub.1-C.sub.5) alkyl group, (C.sub.2-C.sub.5) alkenyl, or a (C.sub.2-C.sub.5) alkynyl, (C.sub.1-C.sub.5) alkoxy, (C.sub.2-C.sub.5) alkenyloxy, or (C.sub.2-C.sub.5) alkynyloxy, --N3, --COR5, --CONR5R6, --CO2R5, --OCOR5, --NH(OH), --NR5R6, --NHCOR5, --N(OH)COR5, --CH2OR5, --OCH2CO2R5, --CH2SR5, --CH2NR5R6, --SR5, --OSR5, or --NR5SO2R6, where R5 and R6 are each independently hydrogen, substituted or unsubstituted (C.sub.1-C.sub.5) alkyl, (C.sub.2-C.sub.5) alkenyl, or (C.sub.2-C.sub.5) alkynyl, or a cycloalkyl or aryl group having 3 to 10 carbon atoms; R3 is H or OH; R4 is H, (C1-C10) alkyl, (C1-C10) alkenyl, (C1-C10) alkynyl, -A-Ar, -A-Z-Ar, --SO.sub.2--Ar, or -A-NR.sub.5, or --R.sub.7, where A, Z and Ar are as defined herein, and the use of the compounds for detecting or identifying a receptor which binds the compounds of the invention or for treating a PAF associated condition in a subject.

[0001] This application is a continuation-in-part of U.S. Ser. No. 10/109,965, filed Mar. 29, 2002, and claims the benefit of U.S. Provisional Application No. 60/436,916, filed Dec. 27, 2002, the entire contents of both are hereby incorporated by reference.

---------- KWIC ---------

Detail Description Paragraph - DETX (237):

[0271] Synthesis. A series of photoactivatable GB (2) and ginkgolide C (GC, 3) derivatives were synthesized. The design of GB derivatives 8a-c and GC derivatives 9a-c (FIG. 3) was based on previous SAR studies of ginkgolides which demonstrated that bulky aromatic substituents in the 10-OH position of GB (2) increases activity at the PAFR (Park, 1996; Hu, 1999; Hu, 2000). Three different photoactivatable moieties, benzophenone, trifluoromethyldiazirine and tetrafluorophenyl azide (see 7a-c, FIG. 3) were chosen as they have been described as being among the most successful for labeling receptors and enzymes (Dorman, 2000; Flemming, 1995; Kotzyba-Hilbert, 1995). Most importantly, upon irradiation these photoactivatable groups react with the receptor via different intermediates, namely, a radical, a carbene or a (singlet) nitrene for the benzophenone (7a), trifluoromethyldiazirine (7b) and tetrafluorophenyl azide (7c) moieties, respectively (Dorman, 2000). Since it is essentially impossible to predict which group will be most readily incorporated into the receptor, use of these different groups increases the likelihood of a successful incorporation.

PGPUB-DOCUMENT-NUMBER: 20030194370

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030194370 A1

TITLE: Analogs of terpene trilactones from ginkgo biloba for bioorganic and imaging studies

PUBLICATION-DATE: October 16, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Stromgaard, Kristian	New York	NY	US	
Suehiro, Makiko	White Plains	NY	US	
Nakanishi, Koji	New York	NY	US	

APPL-NO: 10/ 109965

DATE FILED: March 29, 2002

US-CL-CURRENT: 424/1.11, 514/183 , 514/453 , 548/960 , 549/297

ABSTRACT:

A compound having the structure: 1
wherein R.sub.1 is H, OH, a photoactivatable moiety, a fluorescent moiety, or a radioactive moiety;
wherein R.sub.2 is H, OH, a photoactivatable moiety, a fluorescent moiety, or a radioactive moiety;
wherein R.sub.3 is H or OH;
wherein R.sub.4 is H, OH, a photoactivatable moiety, a fluorescent moiety, or a radioactive moiety; and
wherein at least one of R.sub.1, R.sub.2, R.sub.31 or R.sub.4 is a photoactivatable moiety, a fluorescent moiety, or a radioactive moiety.
Optically pure enantiomers and salts of the compound are also described. Also, the synthesis of the compound, and uses of the compound, such as in a method for detecting the localization of, or identifying, receptors, enzymes or other targets, whether in a cell or in a subject.

---------- KWIC ---------

Detail Description Paragraph - DETX (106):
[0131] Synthesis. A series of photoactivatable GB (2) and ginkgolide C (GC, 3) derivatives were synthesized. The design of GB derivatives 8a-c and GC derivatives 9a-c (FIG. 3) was based on previous SAR studies of ginkgolides which demonstrated that bulky aromatic substituents in the 10-OH position of GB (2) increases activity at the PAFR (40-42). Three different photoactivatable moieties, benzophenone, trifluoromethyldiazirine and tetrafluorophenyl azide (see 7a-c, FIG. 3) were chosen as they have been described as being among the most successful for labeling receptors and enzymes (51-53). Most importantly, upon irradiation these photoactivatable groups react with the receptor via different intermediates, namely, a radical, a carbene or a (singlet) nitrene for the benzophenone (7a), trifluoromethyldiazirine (7b) and tetrafluorophenyl azide (7c) moieties, respectively (51). Since it is essentially impossible to predict which group will be most readily incorporated into the receptor, use of these different groups increases the likelihood of a successful incorporation.

PGPUB-DOCUMENT-NUMBER: 20030139590

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030139590 A1

TITLE: DNA encoding SNORF25 receptor

PUBLICATION-DATE: July 24, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Bonini, James A.	Oakland	NJ	US	
Borowsky, Beth E.	Montclair	NJ	US	
Adham, Nika	Ridgewood	NJ	US	
Boyle, Noel	Cliffside Park	NJ	US	
Thompson, Thelma O.	Passaic Park	NJ	US	

APPL-NO: 10/ 278437

DATE FILED: October 22, 2002

RELATED-US-APPL-DATA:

child 10278437 A1 20021022

parent continuation-of 09641259 20000817 US GRANTED

parent-patent 6468756 US

child 09641259 20000817 US

parent continuation-in-part-of PCT/US00/04413 20000222 US PENDING

child PCT/US00/04413 20000222 US

parent continuation-of 09387699 19990813 US GRANTED

parent-patent 6221660 US

child 09387699 19990813 US

parent continuation-in-part-of 09255376 19990222 US ABANDONED

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	DOC-ID	APPL-DATE
WO	PCT/US00/04413	2000WO-PCT/US00/04413	February 22, 2000

US-CL-CURRENT: 536/23.5, 435/320.1 , 435/325 , 435/69.1 , 530/350

ABSTRACT:

This invention provides isolated nucleic acids encoding mammalian SNORF25 receptors, purified mammalian SNORF25 receptors, vectors comprising nucleic acid encoding mammalian SNORF25 receptors, cells comprising such vectors, antibodies directed to mammalian SNORF25 receptors, nucleic acid probes useful for detecting nucleic acid encoding mammalian SNORF25 receptors, antisense oligonucleotides complementary to unique sequences of nucleic acid encoding

mammalian SNORF25 receptors, transgenic, nonhuman animals which express DNA encoding normal or mutant mammalian SNORF25 receptors, methods of isolating mammalian SNORF25 receptors, methods of treating an abnormality that is linked to the activity of the mammalian SNORF25 receptors, as well as methods of determining binding of compounds to mammalian SNORF25 receptors, methods of identifying agonists and antagonists of SNORF25 receptors, and agonists and antagonists so identified.

[0001] This application claims priority of PCT International Application Serial No. PCT/US00/04413, filed Feb. 22, 2000, which claims priority of U.S. Ser. No. 09/387,699, filed Aug. 13, 1999, which is a continuation-in-part of U.S. Ser. No. 09/255,376, filed Feb. 22, 1999, the contents of which are hereby incorporated by reference into the subject application.

---------- KWIC ---------

Detail Description Paragraph - DETX (399):
[0502] Hosford, D. J., et al., "Ginkgolides and platelet-activating factor binding sites", Meth. Enzymol. 187: 433-446 (1990).

PGPUB-DOCUMENT-NUMBER: 20030125539

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030125539 A1

TITLE: DNA encoding SNORF25 receptor

PUBLICATION-DATE: July 3, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Bonini, James A.	Oakland	NJ	US	
Borowsky, Beth E.	Flemington	NJ	US	
Adham, Nika	Ridgewood	NJ	US	
Boyle, Noel	Maplewood	NJ	US	
Thompson, Thelma O.	Clifton	NJ	US	

APPL-NO: 10/ 278455

DATE FILED: October 22, 2002

RELATED-US-APPL-DATA:

child 10278455 A1 20021022

parent continuation-in-part-of 09641259 20000817 US GRANTED

parent-patent 6468756 US

child 09641259 20000817 US

parent continuation-in-part-of PCT/US00/04413 20000222 US PENDING

child PCT/US00/04413 20000222 US

parent continuation-of 09387699 19990813 US GRANTED

parent-patent 6221660 US

child 09387699 19990813 US

parent continuation-in-part-of 09255376 19990222 US ABANDONED

US-CL-CURRENT: 536/23.5

ABSTRACT:

This invention provides isolated nucleic acids encoding mammalian SNORF25 receptors, purified mammalian SNORF25 receptors, vectors comprising nucleic acid encoding mammalian SNORF25 receptors, cells comprising such vectors, antibodies directed to mammalian SNORF25 receptors, nucleic acid probes useful for detecting nucleic acid encoding mammalian SNORF25 receptors, antisense oligonucleotides complementary to unique sequences of nucleic acid encoding mammalian SNORF25 receptors, transgenic, nonhuman animals which express DNA encoding normal or mutant mammalian SNORF25 receptors, methods of isolating mammalian SNORF25 receptors, methods of treating an abnormality that is linked to the activity of the mammalian SNORF25 receptors, as well as methods of

determining binding of compounds to mammalian SNORF25 receptors, methods of identifying agonists and antagonists of SNORF25 receptors, and agonists and antagonists so identified.

[0001] This application claims priority of PCT International Application Serial No. PCT/US00/04413, filed Feb. 22, 2000, which claims priority of U.S. Ser. No. 09/387,699, filed Aug. 13, 1999, which is a continuation-in-part of U.S. Ser. No. 09/255,376, filed Feb. 22, 1999, the contents of which are hereby incorporated by reference into the subject application.

---------- KWIC ---------

Detail Description Paragraph - DETX (405):
[0508] Hosford, D. J., et al., "Ginkgolides and platelet-activating factor binding sites", Meth. Enzymol. 187: 433-446 (1990).

PGPUB-DOCUMENT-NUMBER: 20030007961

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030007961 A1

TITLE: Orthomolecular vitamin E derivatives

PUBLICATION-DATE: January 9, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Wilburn, Michael D.	Cedar Hill	TX	US	

US-CL-CURRENT: 424/94.4, 435/189 , 514/100 , 514/251 , 514/27 , 514/336 , 514/458 , 514/46 , 514/52 , 514/54 , 536/26.13 , 536/27.3 , 536/53 , 536/8 , 544/257 , 546/282.7 , 549/406 , 549/408

ABSTRACT:

Orthomolecular Vitamin E derivative compounds, compositions, and their uses for effecting aging and longevity, nerve activity, hematopoiesis and maintenance of blood cells, hepatic activity, nephritic activity, heart and cardiovascular function, pulmonary function, muscular function, cartilage, bone, and joint health, gastrointestinal function, reproductive system function, vision, immune function, cell membrane integrity, and pain and inflammation; preventing or treating diseases or conditions; treating cancers or obesity; and reducing the risk of Sudden Infant Death Syndrome in an animal. The compounds of the present invention are of formula I: 1
or a pharmaceutically acceptable salt, ester, or solvate, thereof, wherein:
A, B, C, D, and R are as defined herein.

PGPUB-DOCUMENT-NUMBER: 20020164736

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020164736 A1

TITLE: Ginkgo biloba levopimaradiene synthase

PUBLICATION-DATE: November 7, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Matsuda, Seiichi P.T.	Houston	TX	US	
Schepmann, Hala G.	Talent	OR	US	

APPL-NO: 10/ 041007

DATE FILED: January 7, 2002

RELATED-US-APPL-DATA:

non-provisional-of-provisional 60259881 20010105 US

US-CL-CURRENT: 435/183, 435/252.33 , 435/254.2 , 435/320.1 , 536/23.2

ABSTRACT:

The present invention is directed to nucleic acid sequences of Ginkgo biloba diterpene synthases, particularly of a levopimaradiene synthase. More specifically, the invention is directed to a cell of a unicellular organism, such as Saccharomyces cerevisiae or Escherichia coli, comprising levopimaradiene synthase for the metabolically engineered in vivo biosynthesis of a diterpene and a ginkgolide.

---------- KWIC ---------

Summary of Invention Paragraph - BSTX (14):

[0012] There are examples in the art in which heterologous diterpene synthases are introduced into and expressed in organisms such as Escherichia coli, particularly for the purpose of characterizing activity of a soluble form of the enzyme in the absence of any plastidial targeting sequence (Hill et al., 1996; Peters et al., 2000; Williams et al., 2000). However, the novel levopimaradiene synthase of the present invention provides a solution to a need in the art for methods and compositions to quickly produce large amounts of substantially pure ginkgolides in a cost-effective manner, particularly in an organism capable of a high-yield ginkgolide-producing system.

Detail Description Paragraph - DETX (14):

[0065] Levopimaradiene synthase is useful to produce the ginkgolide precursor levopimaradiene. Potential levopimaradiene production methods of the present invention include in vitro conversion of geranylgeranyl diphosphate (GGDP) and in vivo production (in Ginkgo or microorganisms) using biosynthetic GGDP at native levels or in organisms genetically modified to increase the effective amount of geranylgeranyl diphosphate levels. The increase in the effective amount of GGDP allows more substrate (e.g., GGDP) to be available for conversion to levopimaradiene and other enzyme diterpene products without the host organism suffering adverse consequences of low (i.e., below required

levels) GGDP levels.

Detail Description Paragraph - DETX (15):
[0066] Levopimaradiene synthase overexpression in Ginkgo in a specific embodiment allows increased levels of more advanced ginkgolide precursors. In alternative embodiments, additional genes are incorporated for increased quantities of levopimaradiene synthase, thereby leading to increased quantities of levopimaradiene or a ginkgolide. Expression of levopimaradiene synthase, which preferably does not contain a plastidial targeting sequence (see, for example, Peters et al. (2000); Williams et al. (2000)), in organisms that express genes encoding enzymes to metabolize GGDP, whether GGDP is exogenously provided or produced de novo, provide production of ginkgolide or ginkgolide precursors. One such ginkgolide precursor is levopimaradiene.

Detail Description Paragraph - DETX (241):
[0266] In a specific embodiment, nucleic acid sequences encoding other enzymes in the ginkgolide biosynthesis pathway are obtained. In a specific embodiment, a cDNA library, such as for E. coli or S. cerevisiae, comprising Ginkgo biloba sequences are exposed to an E. coli or S. cerevisiae cell, respectively, wherein the cell also comprises the levopimaradiene synthase sequence, and the presence of a desired downstream product is assayed. In a specific embodiment, the GC and/or GC/MS profile of the product is known and its presence is determined. In a further specific example, the nucleic acid sequence for a dehydrogenase, which generates formation of abietatriene, is cloned by assaying pools of cells harboring levopimaradiene synthase and identifying by chromatography (i.e., GC or GC/MS) the pool in which abietatriene is produced. Once a pool is identified, this pool is broken down into its constituents which are assayed in smaller pools and/or individually to identify the cell containing the clone expressing the desired nucleic acid sequence.

Detail Description Paragraph - DETX (246):
[0269] Functional expression in Escherichia coli of the full-length cDNA and corresponding truncations at Ser.sup.61 and Leu.sup.80 provided enzymatic activity capable of cyclizing geranylgeranyl diphosphate to levopimaradiene, as confirmed by GC/MS analysis. Expression of the truncated Phe.sup.129 gene product resulted in complete loss of enzymatic activity. Functional expression in wild-type Saccharomyces cerevisiae of the Ser.sup.61 and Leu.sup.80 truncations yielded levopimaradiene synthase activity, albeit in lower yields than with the bacterial system, whereas the full-length and Phe.sup.129 clones failed to produce detectable levels of biosynthetic product. Isolation and characterization of levopimaradiene synthase represents the first confirmation of an enzyme involved in ginkgolide biosynthesis.

US-PAT-NO: 6759065

DOCUMENT-IDENTIFIER: US 6759065 B1

TITLE: Extraction method, pharmaceutical composition and a cosmetic composition

DATE-ISSUED: July 6, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Ruijten; Henri M.	Bussum	N/A	N/A	NL

APPL-NO: 09/ 719901

DATE FILED: February 15, 2001

PARENT-CASE:

CROSS-REFERENCE TO RELATED APPLICATIONS

This application is a 371 of PCT/NL99/00379, filed Jun. 18, 1999, which claims priority from Dutch patent application serial number 1009437, filed Jun. 18, 1998.

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
NL	1009437	June 18, 1998

PCT-DATA:
APPL-NO: PCT/NL99/00379
DATE-FILED: June 18, 1999
PUB-NO: WO99/65504
PUB-DATE: Dec 23, 1999
371-DATE:
102(E)-DATE:

US-CL-CURRENT: 424/752, 424/725 , 424/774 , 514/286 , 514/468 , 514/783 , 546/63 , 549/297

ABSTRACT:

A compound is extracted from vegetable material, wherein the vegetable material is reduced and treated with a solvent. According to the invention, the vegetable material is frozen using a liquid nitrogen and in frozen condition reduced in size. According to two important embodiments, the vegetable material comes from the ginkgo tree, in particular fresh leaves, and water is used as a solvent. The invention also relates to a pharmaceutical preparation and a cosmetic preparation comprising as active component a compound obtained by the method according to the invention.

13 Claims, 0 Drawing figures

Exemplary Claim Number: 1

--------- KWIC ---------

Claims Text - CLTX (1):

1. A method of extracting a composition comprising a compound from plant parts of Ginkgo Huperzia seratta comprising: freezing the plant parts using a liquified gas; reducing the size of the frozen plant parts; adding an enzyme to break down cell walls of the plant parts of reduced size; adding an extraction solvent to the enzyme treated plant parts to form a mixture; and removing undissolved parts from the mixture to produce an extraction composition comprising a compound, wherein the compound is selected from the group consisting of a ginkgolide a flavonoid, and huprazine.

US-PAT-NO: 6693091

DOCUMENT-IDENTIFIER: US 6693091 B2

TITLE: Analogs of terpene trilactones from Ginkgo biloba for bioorganic and imaging studies

DATE-ISSUED: February 17, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Stromgaard; Kristian	New York	NY	N/A	N/A
Suehiro; Makiko	White Plains	NY	N/A	N/A
Nakanishi; Koji	New York	NY	N/A	N/A

APPL-NO: 10/ 109965

DATE FILED: March 29, 2002

US-CL-CURRENT: 514/183, 424/1.81 , 424/1.85 , 424/1.89 , 514/461 , 548/960 , 549/297 , 549/298

ABSTRACT:

A compound having the structure: ##STR1##

wherein R.sub.1 is H, OH, a photoactivatable moiety, a fluorescent moiety, or a radioactive moiety; wherein R.sub.2 is H, OH, a photoactivatable moiety, a fluorescent moiety, or a radioactive moiety; wherein R.sub.3 is H or OH; wherein R.sub.4 is H, OH, a photoactivatable moiety, a fluorescent moiety, or a radioactive moiety; and wherein at least one of R.sub.1, R.sub.2, R.sub.3, or R.sub.4 is a photoactivatable moiety, a fluorescent moiety, or a radioactive moiety. Optically pure enantiomers and salts of the compound are also described. Also, the synthesis of the compound, and uses of the compound, such as in a method for detecting the localization of, or identifying, receptors, enzymes or other targets, whether in a cell or in a subject.

39 Claims, 7 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 7

---------- KWIC --------

Detailed Description Text - DETX (101):

A series of photoactivatable GB (2) and ginkgolide C (GC, 3) derivatives were synthesized. The design of GB derivatives 8a-c and GC derivatives 9a-c (FIG. 3) was based on previous SAR studies of ginkgolides which demonstrated that bulky aromatic substituents in the 10-OH position of GB (2) increases activity at the PAFR (40-42). Three different photoactivatable moieties, benzophenone, trifluoromethyldiazirine and tetrafluorophenyl azide (see 7a-c, FIG. 3) were chosen as they have been described as being among the most successful for labeling receptors and enzymes (51-53). Most importantly, upon irradiation these photoactivatable groups react with the receptor via different intermediates, namely, a radical, a carbene or a (singlet) nitrene for the

benzophenone (7a), trifluoromethyldiazirine (7b) and tetrafluorophenyl azide (7c) moieties, respectively (51). Since it is essentially impossible to predict which group will be most readily incorporated into the receptor, use of these different groups increases the likelihood of a successful incorporation.

US-PAT-NO: 6468756

DOCUMENT-IDENTIFIER: US 6468756 B1

TITLE: Methods of identifying compounds that bind to SNORF25 receptors

DATE-ISSUED: October 22, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Bonini; James A.	Oakland	NJ	N/A	N/A
Borowsky; Beth E.	Montclair	NJ	N/A	N/A
Adham; Nika	Ridgewood	NJ	N/A	N/A
Boyle; Noel	Cliffside Park	NJ	N/A	N/A
Thompson; Thelma O.	Passaic Park	NJ	N/A	N/A

APPL-NO: 09/ 641259

DATE FILED: August 17, 2000

PARENT-CASE:

This application is a continuation of PCT International Application Serial No. PCT/US00/04413, filed Feb. 22, 2000, which is a continuation U.S. Ser. No. 09/387,699, filed Aug. 13, 1999, now U.S. Pat. No. 6,221,660, issued on Apr. 24, 2001, which is a continuation-in-part of U.S. Ser. No. 09/255,376, filed Feb. 22, 1999, now abandoned, the contents of which are hereby incorporated by reference.

US-CL-CURRENT: 435/7.1, 435/325 , 435/348 , 435/354 , 435/356 , 435/357 , 435/361 , 435/365 , 435/369 , 435/7.2 , 530/350 , 536/23.5

ABSTRACT:

This invention provides isolated nucleic acids encoding mammalian SNORF25 receptors, purified mammalian SNORF25 receptors, vectors comprising nucleic acid encoding mammalian SNORF25 receptors, cells comprising such vectors, antibodies directed to mammalian SNORF25 receptors, nucleic acid probes useful for detecting nucleic acid encoding mammalian SNORF25 receptors, antisense oligonucleotides complementary to unique sequences of nucleic acid encoding mammalian SNORF25 receptors, transgenic, nonhuman animals which express DNA encoding normal or mutant mammalian SNORF25 receptors, methods of isolating mammalian SNORF25 receptors, methods of treating an abnormality that is linked to the activity of the mammalian SNORF25 receptors, as well as methods of determining binding of compounds to mammalian SNORF25 receptors, methods of identifying agonists and antagonists of SNORF25 receptors, and agonists and antagonists so identified.

10 Claims, 24 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 20

--------- KWIC ---------

Detailed Description Text - DETX (353):

Hosford, D. J., et al., "Ginkgolides and platelet-activating factor binding sites", Meth. Enzymol. 187: 433-446 (1990).

US-PAT-NO: 6207190

DOCUMENT-IDENTIFIER: US 6207190 B1

TITLE: Dosage forms for the treatment of the chronic glaucomas

DATE-ISSUED: March 27, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Richardson; Kenneth T.	Anchorage	AK	N/A	N/A
Pearson; Don C.	Lakewood	WA	N/A	N/A

APPL-NO: 09/ 372362

DATE FILED: August 11, 1999

PARENT-CASE:

CROSS REFERENCE TO RELATED APPLICATION

This application is related to United States Provisional Patent Application No. 60/096,658, filed Aug. 13, 1998, and claims all benefits legally available therefrom. Provisional Patent Application No. 60/096,658 is hereby incorporated by reference for all purposes capable of being served thereby.

US-CL-CURRENT: 424/472, 424/468

ABSTRACT:

Four interdependent functional groups of biofactors and biomolecules are identified and formulations are defined which are comprised of their members. The active agents are demonstrated to be complementary in their physiological functions especially as these relate to endothelial biochemistry and physiology, hyperinsulinemia and, ultimately, to vascular health. The active components of the invention are selected for inclusion in precise combinations that reduce a variety of risks of vasculopathy in addition to reducing intraocular pressure. Widespread systemic improvement associated with local, optic nerve betterment of vascular health, reduces the risk of optic nerve atrophy with its accompanying visual field loss and potential blindness. The reduction of this maximizes the potential clinical therapeutic success of current medical, IOP-lowering, anti-glaucoma mediations.

56 Claims, 0 Drawing figures

Exemplary Claim Number: 1

---------- KWIC ---------

Brief Summary Paragraph Table - BSTL (1):

cyclic GMP (core) Group a) L-Arginine Absorption: Absorption of L-arginine is highest in the upper three gastrointestinal regions and least in the ileum. But no preferential site of absorption has been found. Pharmacokinetics: The gastrointestinal uptake of dietary arginine when the stomach is in the "fed" state is about 20% to 38%. b) N-acetylcysteine (NAC) Absorption: NAC is used as a precursor of GSH. Intestinal absorption of NAC is

satisfactory. After an oral dose of 200 to 400 mg of NAC peak plasma concentration is achieved within 1 to 2 hours. The hours. The upper jejunum is a principal site of GSH absorption, which, however, is very limited. This low GSH bioavailability is not increased by high doses. Orally administered GSH at reason- able levels does not affect the circulating concentrations of GSH, whereas NAC adminis- tration increases the GSH content in lungs, blood and/or liver. Oral NAC inhibits gastric emptying. Pharmacokinetics: The administration of NAC increases hepatic cysteine placing it on a path for the modulation of systemic GSH levels. Pharmacokinetics and pharmacodynamic studies of NAC demonstrate elevated GSH levels in plasma, RBC and peripheral blood lymphocytes (PBL), elevated cysteine levels in plasma and increases in two GSH-metabolizing enzymes, glutathione S- transferase and oxidized glutathione reductase, in PBL. These studies have established NAC as the precursor of GSH. c) Riboflavin Absorption: Saturable (active transport) and nonsaturable, energy-independent diffusion of riboflavin occurs throughout the rat small intestine. Pharmacokinetics: A small circadian variation in riboflavin occurs, with plasma concentrations and urinary excretion of riboflavin being low during the afternoon. Since riboflavin may increase gastrointestinal iron absorption it is included in the delayed release portion of the combination dosage form of the invention. d) Folic acid Absorption: Folic acid is absorbed in the first 30 cm of the jejunum by both saturable and diffusional routes. Pharmacokinetics: Folic acid is a coenzyme which humans, unlike bacteria, cannot synthesize de novo, therefore it is a dietary essential. Folic acid is converted to the active coenzyme tetrahydrofolate (THF) by repeated hydrogenation of the pterin ring. The coenzyme THF is then capable of one-carbon- residues transfers of different oxidation states. e) Cyanocobalamin (B.sup.12) Absorption: The ileum is the major site of absorption of vitamin B.sup.12, where its intestinal absorption is facilitated by two receptors and two transporters. Pharmacokinetics: In nature, vitamin B.sup.12 is only exceptionally met in its free form. It is almost always associated with a binder. Alimentary vitamin B.sup.12 released from its protein complexes by culinary preparation and gastric secretions, is combined with haptocorrin. In the duodenum, haptocorrin is partially degraded by pancreatic enzymes and intraluminal pH and B.sup.12 is attached to intrinsic factor for transfer. This combination of the vitamin can then be "caught" by the ileal receptor. Pyridoxine Absorption: Pyridoxine absorption in the jejunum (rat) is non- saturable and consistent with passive diffusion. The gastrointestinal concentrations of pyridoxine in various intestinal segments tend to parallel those of riboflavin, suggesting some similarity of absorption characteristics. While the gastro- intestinal absorption characteristics may be similar to riboflavin, it is unclear if it shares the iron absorption enhancement properties of the latter. Pharmacokinetics: Studies have suggested that a physiological dose of pyridoxine is transformed to pyridoxal in the intestinal tissues and then released in this putative active form into the portal blood. Calcium Wave Modulation Group f) Magnesium Taurate Absorption: Taurine uptake across the intestinal brush border membrane of the adult cat seems not to require a specific transport mechanism, although the steady-state uptake of taurine by rat intestinal cells is saturable. Pharmacokinetics: Taurine, even at a low concentration, seems to enhance drug absorption due to its effect on the permeability characteristics of the mucosal membrane Bile salts are synthesized in the liver from cholesterol conjugated with taurine. Within the gastrointestinal lumen these bile salts play an essential role in lipid absorption and fat transport. g) Magnesium Oxide (MgO) Absorption: Mg.sup.2+ is absorbed by active transport in the ileum although there is limited passive diffusion throughout the intestine. Pharmacokinetics: MgO must be converted to magnesium chloride in the acid milieu of the stomach. However, there is a maximum Mg.sup.2+ absorption of 8 mEq per meal with a curvilinear falloff and Mg.sup.2+ absorption is negatively influenced by dietary protein: soybean protein, when

compared with casein, decreases Mg.sup.2+ absorption through its phytate component. These both speak to the importance of multiple doses per day. Cell Membrane Integrity Group h) D,.alpha.-Tocopherol Absorption: The gastrointestinal absorption of dietary D,.alpha.- tocopherol is dependent upon the simultaneous digestion and absorption of the fat in which the vitamin is solubilized. Taurine may enhance D,.alpha.-tocopherol absorption (vide supra, p 22.). The site of D,.alpha.-tocopherol absorption is probably the proximal small intestine. Pharmacokinetics: Evidence suggests that further uptake of the tocopherols occurs in the deep crystal zone of the colonic mucosa where actively proliferating cells extract nutrients from the systemic circulation. i) Magnesium Ascorbate Absorption: Natural and synthetic ascorbates (and folates) are avidly absorbed in the first 30 cm of jejunum. Pharmacokinetics: There is no pharmacokinetic justification for the use of megadoses of ascorbate (vit C). As the daily oral dose vit C is increased, the concentration of ascorbic acid in the plasma and other body fluids does not increase proportionally, but approaches an upper limit. Analysis indicates that both saturable gastrointestinal absorption and nonlinear renal clearance act additively to produce a ceiling effect in plasma concentrations. As a consequence of this ceiling effect, there is no pharmacokinetic justification for the use of extremely large doses of vit C. Vit C must be considered a physiological factor essential for the absorption of dietary iron; recurrent renal stone formers and patients with renal failure who have a defect in vit C or oxalate metabolism should restrict daily vit C intakes to approximately 100 mg. j) Ubiquinone (CoQ10) Absorption: Supplemental oil-based capsules elevate CoQ10 in plasma by 178% while granular preparations increase CoQ10 in plasma by 168%. Each is therefore an acceptable delivery vehicle. Pharmacokinetics: After oral administration of 100 mg of d5- CoQ10 to 16 healthy male subjects, the mean plasma CoQ10 level attained a peak of 1.004 +/- 0.370 micrograms/ml at 6.5 +/- 1.5 h after administration, and the terminal elimination half- life was 33.19 +/- 5.32 h. In most of the subjects, plasma d5-CoQ10 showed a second peak at 24 h after dosing. This unusual plasma level curve can be well described by a compartment model based upon the assumption that absorbed CoQ10 is taken up by the liver and then transferred mainly to very low density lipids (VLDL) and redis- tributed from the liver to the systemic blood. k) Quercetin Absorption: Intestinal absorption of quercetin is 24% +/- 9%. Absorption is enhanced by conjugation with glucose. Pharmacokinetics: Quercetin can be absorbed by humans from dietary sources in high enough concentration to increase the overall antioxidant activity of the plasma. Quercetin, however, has a strong affinity for protein. l) Copper (Cu.sup.+2) Absorption: 30-40% of Cu.sup.+2 GI absorption is via a carrier-mediated transport but because aging probably decreases the efficiency of Cu.sup.+2 homeostasis, higher plasma Cu.sup.+2 concentrations are sometimes found in the elderly. A minimum dietary Cu.sup.+2 requirement of between 0.4 and 0.8 mg/d is needed to replace daily copper losses of approx- imately 1.3 mg/day. Supplementation with even a moderate amount of Zn.sup.+2 has a detrimental effect on Cu.sup.2 levels. Pharmacokinetics: The human gastrointestinal system can absorb 30-40% of ingested Cu.sup.+2. Dietary supplements of minerals with similar chemical characteristics (e.g., Zn.sup.+2) can reduce Cu.sup.+2 absorption and manipulation of the fiber content of the diet may have an indirect effect on Cu.sup.+2 bioavailability by altering the bioavailability of these mineral antagonists. Proteins, organic acids other than ascorbic acid (or agents that form low-molecular-weight chelates) and soluble carbohydrates tend to improve Cu.sup.+2 absorption. m) Zinc (Zn.sup.+2) Absorption: Absorption of Zn.sup.+2 ranges from 40 to 86%. About 37% of ingested Zn.sup.2 enters the plasma and gastro-intestinal absorption is essentially completed by 4 hours. The duodenum and ileum are important sites for rapid Zn.sup.+2 absorption. A continuous, slower absorption of Zn.sup.+3 may take place in the jejunum while the stomach, cecum and colon appear to be insignificant sites of absorption.

Pharmacokinetics: Mean plasma Zn.sup.+2 increases only 37% above pre-load levels in face of an 11-fold increase in intake. n) Selenium (Se) Absorption: Sodium selenite is absorbed slowly, possibly by simple diffusion through the intestinal mucosa. Pharmacokinetics: Thiols positively influence mucosal uptake of Se. As an example, L-cysteine stimulates Se uptake in the middle and distal jejunum and cecum but not in the proximal jejunum. This effect is maximal in the distal jejunum. Also, the absorption of amino acid-bound Se is accelerated by specific amino acid active transport mechanisms in the gut mucosa. o) Melatonin Absorption: Ingestion of 3 mg melatonin causes a marked increase in serum melatonin (3561 +/- 1201 pG/mL) within 20 min. Although this is followed by a gradual decrease, the level still remains higher than the basal level at 240 min after ingestion. Pharmacokinetics: When huge doses of melatonin (80 mg) are administered orally, changes in serum melatonin levels are best described by a biexponential equation with an absorption constant (ka) of 1.72 h-1 (half-life = 0.40 h) and an elimination constant (kel) of 0.87 h-1 (half-life = 0.80 h). Peak serum melatonin occurs 60-150 min after its administration, remaining stable for approx- imately 1.5 hours. p) Ginkgo Biloba Extract (EGB) Absorption: The absorption of EGB is about 60%. Different formulations of Ginkgo biloba extracts (e.g., capsules, drops or tablets) appear to be bio-equivalent. Pharmacokinetics: The ginkgolides and bilobalides, which are compounds extracted from the dried leaves of the Ginkgo biloba tree, have high bioavailability when given orally during fasting. The bioavail- ability coefficients (FAUC) have mean (+/-SD) values equal to 0.80 (+/-0.09), 0.88 (+/-0.21) and 0.79 (+/-0.30) for Ginkgolide A, Ginkgolide B and Bilobalide respectively. Food intake does not

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  * * * * * * * * * * * * * * STN  Columbus  * * * * * * * * * * * * * * *

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L49  ANSWER 1 OF 4  SCISEARCH  COPYRIGHT (c) 2004 The Thomson Corporation.  on
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STN DUPLICATE 1
TI Synthesis and characterization of abietadiene, **levopimaradiene**, palustradiene, and neoabietadiene: hydrocarbon precursors of the abietane diterpene resin acids
SO TETRAHEDRON, (16 JUL 2001) Vol. 57, No. 29, pp. 6155-6167.
Publisher: PERGAMON-ELSEVIER SCIENCE LTD, THE BOULEVARD, LANGFORD LANE, KIDLINGTON, OXFORD OX5 1GB, ENGLAND.
ISSN: 0040-4020.
AU Lee H J; Ravn M M; Coates R M (Reprint)
AN 2001:591790 SCISEARCH

L49 ANSWER 2 OF 4 MEDLINE on STN DUPLICATE 2
TI Cloning and characterization of Ginkgo biloba **levopimaradiene** synthase which catalyzes the first committed step in ginkgolide biosynthesis.
SO Archives of biochemistry and biophysics, (2001 Aug 15) 392 (2) 263-9.
Journal code: 0372430. ISSN: 0003-9861.
AU Schepmann H G; Pang J; Matsuda S P
AN 2001443058 MEDLINE

L49 ANSWER 3 OF 4 MEDLINE on STN DUPLICATE 3
TI Abietadiene synthase from grand fir (Abies grandis): characterization and mechanism of action of the "pseudomature" recombinant enzyme.
SO Biochemistry, (2000 Dec 19) 39 (50) 15592-602.
Journal code: 0370623. ISSN: 0006-2960.
AU Peters R J; Flory J E; Jetter R; Ravn M M; Lee H J; Coates R M; Croteau R B
AN 2001088157 MEDLINE

L49 ANSWER 4 OF 4 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation. on STN DUPLICATE 4
TI CHANGES OF CA2+ CALMODULIN-DEPENDENT PROTEIN-KINASE-II AFTER TRANSIENT ISCHEMIA IN GERBIL HIPPOCAMPUS
SO ACTA NEUROBIOLOGIAE EXPERIMENTALIS, (1996) Vol. 56, No. 1, pp. 41-48.
ISSN: 0065-1400.
AU ZALEWSKA T (Reprint); ZABLOCKA B; DOMANSKAJANIK K
AN 96:237853 SCISEARCH

=> fil .becpat
COST IN U.S. DOLLARS

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FILES 'BIOTECHDS, HCAPLUS, WPIDS' ENTERED AT 09:27:51 ON 30 AUG 2004
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3 FILES IN THE FILE LIST

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59176 PY>=2002
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L54           2 DUP REM L53 (1 DUPLICATE REMOVED)

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L54  ANSWER 1 OF 2  HCAPLUS  COPYRIGHT 2004 ACS on STN
TI   Metabolic engineering of enzymes for increased diterpene production in
     unicellular organisms
SO   U.S. Pat. Appl. Publ., 38 pp.
     CODEN: USXXCO
IN   Matsuda, Seiichi P. T.; Hart, Elizabeth A.
AN   2004:310772  HCAPLUS
DN   140:333562
     PATENT NO.          KIND   DATE        APPLICATION NO.         DATE
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PI   US 2004072323        A1    20040415    US 2002-41018           20020107 <--

L54  ANSWER 2 OF 2  HCAPLUS  COPYRIGHT 2004 ACS on STN DUPLICATE 1
TI   Cloning and sequence of Ginkgo biloba levopimaradiene synthase
     and use of the recombinant levopimaradiene synthase for the
     metabolically engineered in vivo biosynthesis of a diterpene and a
     ginkgolide
SO   U.S. Pat. Appl. Publ., 37 pp.
     CODEN: USXXCO
IN   Matsuda, Seiichi P. T.; Schepmann, Hala G.
AN   2002:850244  HCAPLUS
DN   137:348419
     PATENT NO.          KIND   DATE        APPLICATION NO.         DATE
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PI   US 2002164736        A1    20021107    US 2002-41007           20020107 <--


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